Factory based new business development
- Diversification strategies through organizational capability of manufacturing -

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Abstract

This paper aims to explore how to implement diversification strategies successfully to develop a new business through organizational capability of manufacturing factories in the Multinational Company (MNC).

Although diversification strategies mainly have been argued from perspective of head quarter, we focus on the role of factory. This study explored some important findings. First, when resources transfer from head quarter to overseas factory proceeds to some extent, overseas factory develops new business to meet special local needs.

Second, what made it possible to implement diversification strategies successfully was interaction from factories to head quarter that was led by strong subsidiary initiative.

Keywords: Diversification strategy, organizational capability, subsidiary initiative

Introduction

Today, when existing business declines, factories under its umbrella would be closed down, and their accumulated technical expertise and organizational capability would be also lost. In particular, since product life cycle is shortened recently, factories would be easily closed when there is replacement of business. Under such circumstances for the factory, it is necessary to build a new capability for survival. Therefore, this paper aims to explore how to implement diversification strategies successfully based on the organizational capability of manufacturing factory in the MNC.

In previous studies, diversification strategies of MNC mainly have been argued from perspective of the head quarter. However, we focus on the role of factory. Small and medium-sized firm specialized in the core process technology (such as press, molding, and casting), is mostly developing new customers and new businesses based on the process technologies of their factories. Even in large firm of MNC, there are factories that have strong competitiveness in the core process technology. Such knowledge unique to the factories has evolved and developed as organizational capability, which is source of...
competitive advantage of the firm. Therefore, developing a new business to survive by utilizing the organizational capability of factories is more likely to contribute to maintaining the long-term competitiveness of firm.

However, it is not easy for large firm of MNC that takes the divisional structure, to propose new business from factories that are only production sites. Because diversification strategies tend to be implemented by central decision making designed by head quarter (R&D or corporate planning section) that details how to create synergy effects on product technologies and/or on sales.

This paper addresses the following research question: How MNC could implement diversification strategies successfully to develop a new business through organizational capability of manufacturing factories? In order to explore our research question, we apply a conceptual framework defined by Schmid et al.(2014). In our discussion of diversification, we firstly argue that developing a new business to survive by utilizing the organizational capability of factories is more likely to contribute to maintaining the long-term competitiveness of firm. In this line of arguments, we will emphasize a focus on how to implement diversification strategies successfully. In our case analysis, the focus is on how to build organizational capability of manufacturing subsidiaries for new business development. Based on the case study, we draw an insight on what made it possible to implement diversification strategies successfully was interaction from manufacturing factories to head quarter that was led by strong subsidiary initiative. However, the generalization will remain a topic for future research.

Our methodology is case-based. Diversification under the framework defined by Schmid et al.(2014) is contended in this study. It is expected to contribute both theoretically and practically to MNC, hence, enriching the existing literature.

Literature Review
The literature on the key factors associated with new business development, including diversification strategy, resources-organizational capability-diversification performance, and subsidiary initiative.

Diversification Strategy
Diversification strategy, in terms of entering into a related or unrelated business and/or entering into a new geographic market is considered to be of crucial importance to an organization’s long term leadership position in its own industry (Hoopes, 1999; Goerzen & Beamish, 2003; Nachum, 2004; Narasimhan & Kim, 2002). Another definition of diversification strategy is a strategy implemented by the top executives in order to achieve business growth by entering new businesses and attaining above-average returns by taking advantage of the incoming opportunities (Narasimhan & Kim, 2002). Strategic management literature has studied extensively the costs and the benefits of diversification strategy and its effect on competitive advantage for an organization (Chakrabarti, Singh, & Mahmood, 2007; Palich, Cradinal, & Miller, 2000; Ramanujam & Varadarajan, 1989). Researchers have particularly focused on the effect of product/service diversification which is defined as the synergy in different lines of business (Berger & Ofek, 1995; Bettis & Mahajan, 1985) and, international diversification or geographical diversification in a different market (Fang, Wade, Delios, & Beamish, 2007; Ghoshal, 1987; Kim, Hwang, & Burgers, 1993) on firm performance.

Thus, the center of attention in the diversification strategy field, mainly laid down towards on how to manage diversification so to improve the performance. However, there is few empirical research that has investigated how the management decision to be taken for the effective diversification strategy.
For resource-based view (RBV) scholars, a firm is a bundle of resources and capabilities (Wernerfelt, 1984). Amit and Schoemaker (1993) define resource as stocks of available factors that are owned or controlled by the firm. Resource consist of tangible components like financial and physical assets like property, plant and equipment, and intangible components like human capital, patent, technology knowhow (Grant, 1991; Amit & Schoemaker, 1993). Capability is defined as the ability of the firm to use its resource to effect a desired end (Amit & Schoemaker, 1993). It is like intermediate goods generated by the firm using organizational processes to provide enhanced productivity to its resources (Amit & Schoemaker, 1993). Capabilities are invisible assets, tangible or intangible organizational processes developed by a firm over a period of time that cannot be easily bought (Teece, Pisano, & Shuen, 1997).

RBV argues that firms will have different nature of resources and varying levels of capabilities. Firms' survival depends on its ability to create new resources, build on its capabilities platform, and make the capabilities more inimitable to achieve competitive advantage (Day & Wensley, 1988; Peteraf, 1993; Prahalad & Hamel, 1990). Thus, mere possession of superior resources cannot achieve competitive advantage for the firm, but how a firm deploys its scarce resources, put its capabilities to best use, invest and complement its existing capabilities infrastructure can bring immobility and inimitability to its resource-capability framework (Peteraf, 1993; Song et al., 2007). There has been extensive use of RBV framework to analyze firm performance (Dutta, Narasimhan, & Surendra, 1999; Liebermann & Dhawan, 2005), to understand the interaction between organizational capabilities and their effect on performance (Song et al., 2007; Song, Droge, Hanvanich, & Calantone, 2005; Song, Nason, & Benedetto, 2008).

According to RBV, a firm diversifies to extend its resources into new markets and businesses. Resources and capabilities such as business knowledge, technological expertise, and international diversification experience are transferred between the parent company and its business subsidiaries (Fang et al., 2007; Lu & Beamish, 2001). RBV posits that as firms diversify within the scope of their resources and capabilities, they obtain economies of scale through lower operational costs and leverage superior business efficiency through shared fixed assets like common production facilities, distribution channels, or even brand names (Hitt et al., 1997). In addition, RBV theory suggests that firm performance is due to initiative of resources that have differential productivity (Makadok, 2001).

Although there are factories in MNC that developed the core process technology and such knowledge unique to the factories has developed as a source of strengths of the firm, it is not easy for MNC to propose new business from factories. Because diversification strategies tend to be implemented by central decision making designed by head quarter that details how to create synergy effects on product technologies and/or on sales (Chandler, 1962; Hoskisson, 1987; Nath et al., 2010). Consequently, new businesses based on the factory’s technological expertise and organizational capabilities have been rarely developed.

**Subsidiary Initiative**

Subsidiary initiatives are proactive, autonomous and risk-taking activities that originate outside the home country in a foreign subsidiary of a MNC and are initiated by actors in the subsidiary. The study of subsidiary initiatives constitutes a growing literature in the International Business field (Verbeke et al., 2011). Subsidiaries pursue entrepreneurial opportunities for local and global application, often even independently of the parent
organization (Birkinshaw, 1997; Ghoshal and Bartlett, 1988; Scott and Gibbons, 2009; Williams, 2009). Although the potential benefits of subsidiaries taking their own initiatives are increasingly acknowledged, the concept of subsidiary initiatives was even recently labeled a troublesome and little-understood concept (Ambos et al., 2010).

Julian Birkinshaw (1997) defined subsidiary initiative as a type of dispersed entrepreneurship in which initiative is undertaken by an MNC subsidiary outside the home country and not by the corporate center. Following Kanter (1982), he defined initiative as a discrete, proactive undertaking that advances a new way for the corporation to use or expand its resources. A successful subsidiary initiative, adds Birkinshaw, is an entrepreneurial process that begins with the identification of an opportunity and culminates in the commitment of resources to that opportunity.

Since the initial definition of subsidiary initiatives laid heavy emphasis on entrepreneurial subsidiary behaviour and few detailed literature review on the topic how to construct subsidiary initiatives, Schmid et al.(2014) conducted a systematic search in in all relevant academic business journals to derive a framework that helps to distinguish between different types of subsidiary initiatives. Some initiatives may involve mainly organizational entrepreneurship by MNC subsidiaries, reflecting their increasing weight within the operations of the parent organization and their increasing potential over time to cause periodic organizational disequilibrium within the MNC. Other initiatives, however, may involve a high level of market entrepreneurship to take advantage of business opportunities deriving from special demographical and social characteristics of these mega-markets (Figure 1).

![Diagram](source: Schmid et al., 2014)

*Figure 1*- Integrative framework of different subsidiary initiatives type

However, they lack any clear-cut case of a subsidiary initiative belonging in the lower left-hand corner, i.e. very low on both market entrepreneurship and organizational entrepreneurship. Then, this paper tries to show some specific examples in this area so to contribute to clarify a total concept of integrative framework of different subsidiary initiatives type defined by Schmid et al.(2014).
Cases
This paper considers an exploratory case study of new business development in the real world. Yin (1994) claims that case studies are most appropriate for exploratory research. A Japanese Manufacturing Company X makes digital still camera in a product assembly factory B of a subsidiary in China, a lens (aspheric lens and lens units) component factory A in a subsidiary in north Japan, with the R&D head quarter in central Japan. In Company X, in-house production of aspheric lens and lens units are defined as black box technology to achieve the best picture quality, which are regarded as their competitive advantages. This study highlights technology transfer from one lens factory in Japan to an assembly factory in China.

The cases represent a series of backward integration in China with the support of core technology transfer of lens from Japan. This core technology transfer helped the factory in China to make significant financial improvement in 2015, recovering from the past financial deficit while the global market of DSC declined to almost one-third in quantity and almost half in amount in 2015 versus 2010.

Data used
To confirm the validity and reliability of the research results, three different sources of data were used for this case study. First, qualitative data were collected by conducting in-depth interviews with 22 diverse executives from Company X from 2015 to 2017. Those interviewed included 5 managers from the head quarter in Japan, 5 from the lens factory in Japan, and 12 (6 each Japanese and Chinese managers) from the assembly factory of Company X in China. These managers are responsible for planning, R&D, procurement, production, and marketing as they are in a core position to obtain information to identify the background, motives, objectives, structures, processes, roles and responsibilities, and performance evaluation between head quarter and subsidiaries. Each interview was documented carefully with their permission. All the interviews were tape-recorded and documented in detail. Formal, structured interviews were conducted to maintain consistency. Post interview analysis included comparison of the multiple interview results with the findings of earlier studies and additional questions were probed as needed.

Second, performance results and evolution of the Company’s X factory in China from 2011 to 2015 are used as a key performance indicator of the adequate retaining ability of beneficiaries to transfer the technology. The comparative figures of the sales, fixed cost, marginal profit ratio, stock days, and profit ratio during 2011–2015 were collected. Such longitudinal case studies allow the examination of the stable and up-to-date evolving sets of manufacturing practices.

Third, to measure the global demand of DSC, the market data from 2009 to 2015 were obtained from Camera and Imaging Products Association (CIPA) in Japan. The market share data for Japanese manufacturers in 2011 of GfK, a market demand research company, were also used.

Digital Still Camera Market
Owing to commoditization of the compact category and decline in total demand, there has been stiff competition in the digital camera market. Camera-embedded smart phones have posed a big threat. There has been a sharp decline in the global demand for the compact category of DSCs since 2010. The global demand in 2015 versus 2010 was at level of one-third in quantity base, half in amount base (Table 1). Table 1 shows the global shipment evolution of Japanese manufacturers for DSC from 2009 to 2015 based on data from the CIPA in Japan. Since Japanese manufacturers represent a majority of the global
market share for DSCs (77.9% for total DSC, 99% for interchangeable lens camera in 2011 based on the Gfk in Table 2), global shipment evolution of Japanese manufacturers for DSC could indicate the basic trend of the global market demand for DSC.

**Table 1—Global demand evolution of DSC (Shipment base by Japanese Manufacturers)**

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</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>Quantity (Millions pcs)</td>
<td>105.9</td>
<td>121.5</td>
<td>115.5</td>
<td>98.1</td>
<td>62.8</td>
<td>43.4</td>
<td>35.4</td>
</tr>
<tr>
<td></td>
<td>Amount (Billions yen)</td>
<td>1,620.8</td>
<td>1,643.3</td>
<td>1,452.2</td>
<td>1,468.1</td>
<td>1,168.5</td>
<td>964.5</td>
<td>885.4</td>
</tr>
<tr>
<td>Built-in Lens (Compact)</td>
<td>Quantity (Millions pcs)</td>
<td>96.0</td>
<td>108.6</td>
<td>98.9</td>
<td>77.9</td>
<td>45.7</td>
<td>29.6</td>
<td>22.3</td>
</tr>
<tr>
<td></td>
<td>Amount (Billions yen)</td>
<td>1,162.0</td>
<td>1,140.0</td>
<td>917.6</td>
<td>714.9</td>
<td>490.2</td>
<td>359.2</td>
<td>308.1</td>
</tr>
<tr>
<td>Interchangeable Lens</td>
<td>Quantity (Millions pcs)</td>
<td>9.9</td>
<td>12.9</td>
<td>16.6</td>
<td>20.2</td>
<td>17.1</td>
<td>13.8</td>
<td>13.1</td>
</tr>
<tr>
<td></td>
<td>Amount (Billions yen)</td>
<td>458.8</td>
<td>503.3</td>
<td>534.6</td>
<td>753.2</td>
<td>678.3</td>
<td>605.3</td>
<td>577.3</td>
</tr>
</tbody>
</table>

(Source: data of Camera and Imaging Products Association in Japan)

**Table 2—Global market share of DSC by Japanese Manufacturers**

<table>
<thead>
<tr>
<th>Market Share</th>
<th>Total Category</th>
<th>Interchangeable Lens</th>
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<tbody>
<tr>
<td>Japanese</td>
<td>77.9</td>
<td>99.0</td>
</tr>
<tr>
<td>Others (%)</td>
<td>22.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

(Source: Gfk/Jan–Dec 2011)

*Diversification process and strategy from two factories.*

The following cases represent a series of activities as to diversification process and strategy from two factories.

**Factory A in Japan**

The factory A in north Japan started operation as a component factory producing magnetic heads, lens barrels and cylinders for video cameras in 1982. But around 2000, as the demand for video cameras declines the factory faced a crisis of closure. Therefore, in order to overcome this crisis, the factory has implemented a diversification strategy that takes advantage of the organizational capability of core process technology cultivated by the factory in the past.

In particular, factory A began to develop aspheric lens and lens barrel for digital still camera (DSC) based on core process technology such as cutting, molding and polishing (Figure 2). At the same time the factory itself also cultivated new external customers. Previously the customer was only an in-house subsidiary.

In addition, they continued to develop and evolve a set of technologies while listening to external customer request, and also advanced into automotive related business.

As a result, sales have doubled and the crisis of factory closure has gone out without fail.
Factory B in China
The factory B of a subsidiary in China started operation as a audio related factory producing radios, portable CD players and so on. After that, since 2005 the factory has been producing DSC and lenses.

However, global demand for DSC will sharply decrease due to the rapid growth of the smartphone market from around 2011. Along with that, the profit structure of factory B worsened. Therefore, Mr.Y who has manipulated a series of diversification strategies of factory A got a position as the factory B director, and also executed a similar diversification strategy there.

Up to around 2011, the factory B was a management structure that completely depends on DSC demand. To escape from only DSC production the factory devised some strategies.

First, the factory B has evolved the core process technology such as die machining, molding, mounting, and precision assembly which the factory A has cultivated up until then, and established a development department (optical design, electrical design, mold design, lens barrel design, mechanical design) in 2014. After that, the factory advanced into new fields such as medical equipment for Chinese domestic market and the drone for aerial photography. Second the factory also sold products himself to create sales to such new customers.

Backward integrated manufacturing and downstream activity helped factory B in China to enter into diversified business that could lead to make significant financial improvement in 2015, recovering from the past financial deficit while the global market of DSC declined to almost one-third in quantity and almost half in amount in 2015 versus 2011 (Table 3).

Table 3 - Performance evolution of China factory
Findings
This study explored three important findings.

First, in case that the transfer of management resources from head quarter to overseas subsidiary proceeds to some extent, overseas subsidiary develops new business to meet special local market needs, which is difficult for head quarter to follow it.

Second, what made it possible to implement diversification strategies successfully was interaction from manufacturing factories to head quarter that was led by strong subsidiary initiative.

Third, overseas subsidiaries developed their organizational capabilities to launch new business while receiving the resources transferred from head quarter.

Today, factory that produces conventional product is far away from the decision-making of diversification designed by interaction from head quarter so that new businesses based on the factory technology expertise and organizational capability of factory could be rarely developed.

Theoretical contribution
These findings have some important theoretical contribution.

First, an overseas subsidiary launches a new business under the initiative of the subsidiary regardless of the mission of the head quarter and the source of such local initiative comes from not only market needs but also organizational capability of manufacturing factories.

Second, it is necessary for head quarter (R&D or corporate planning section) of MNC to know how to make the effective decision making of diversification strategy, not only based on synergy effects on product technologies and/or on sales, but also, based on the organizational capability of manufacturing factories.

Third, this paper showed some specific examples in lacking area of concept of integrative framework of different subsidiary initiatives type defined by Schmid et al. (2014) so to contribute to clarify how to construct subsidiary initiatives in total.

This study has a unique contribution in that we explored how to implement diversification strategy successfully based on the organizational capability of manufacturing factories. We do hope that researchers as well as MNC managers can benefit from this research to make the successful implementation of diversification strategy that could lead to high performance outcomes.

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References
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